The Coevolution of Finance and Property Rights: Evidence from Transitional Economies

Christopher Hartwell
[chartwell@kozminski.edu.pl; Christopher.hartwell@case-research.eu]

Christopher Hartwell is an associate professor at the Kozminski University and President of the Center for Social and Economic Research (CASE), both in Warsaw (Poland). *He thanks the Bank of Finland Institute for Economies in Transition (BOFIT) for their intellectual and data support of this article. He also appreciates the contributions of the editor of this journal and an anonymous referee on earlier drafts of the article.*

Abstract: The transition from communism to capitalism was necessarily accompanied by a sudden and abrupt increase in the financialization of society. This increase occurred in an environment that, even now, still has little experience with or expertise in financialization. Given that financialization occurred simultaneously with the growth and evolution of other political and economic institutions, the question arises: What was the effect on these other nascent institutions like property rights? This article empirically analyzes the relationship between financialization and property rights in transition countries. Using a unique monthly database of twenty transition countries over a period from 1989 to 2012, this article finds that the influence of financialization depends on which definition of "financialization" is used. In particular, increases in basic financial intermediation improved property rights. However, higher-order "financialization," proxied here by the size of capital markets and the wages in the financial sector, appeared to have a negative impact on the development of broad-based property rights in transition.

Keywords: Central and Eastern Europe, financialization, institutional change, property rights, transitional economies,

JEL Classification Codes: G21, P26, P34

The economic transition in Central and Eastern Europe (CEE) and the former Soviet Union (FSU) has heavily relied on the development of a formal financial sector as "capitalism" cannot be built without funding or finance. Enabled by varying levels of financial liberalization across the region (with the CEE countries going much further, much faster than their FSU counterparts), foreign financial institutions contributed to the broadening and deepening of financial markets — in particular, the development of a broad-based banking sector (Table 1) — in countries that had had no experience with formal financial intermediation (Caviglia, Krause and Thimann 2003; Hartwell 2013).

Table 1 about here

Much economic research has been done on financial sector development in transition, with early papers like Erik Berglof and Patrick Bolton's (2002) work noting the existence of a "Great Divide" in terms of financial sector performance. By contrast, there has been a correspondingly

lower emphasis on the socio-economic effects of the financial sector transition in CEE and FSU, especially as it pertains to the process of "financialization" (Raviv [2008] and Gabor [2010] are notable exceptions). In its broadest definition, financialization typically refers to "the increasing dominance of the finance industry in the sum total of economic activity, of financial controllers in the management of corporations, [and] of financial assets among total assets" (Dore 2002, 116-117). This definition, focusing on the extent of the financial sector and its impact on society, means that financialization was a crucial part of the transition process in many ways, as "capitalism" could not be built without "capital."

More precise definitions of other facets of financialization, however, raise other questions about financial sector development in transition. In particular, Gerald Epstein (2005, 3) notes that financialization may also capture "the growing dominance of capital market financial systems over bank-based financial systems," a point that Ronald Dore (2002, 117) also implied when describing "the stock market as a market for corporate control." This is an accurate description of the process of financial sector development in transition because transition saw a compressed version of the financial development that took place in developed economies, with the main difference being that financialization in the forms of capital markets accompanied, rather than preceded, bank-based intermediation. This turn of events was due mainly to the forces responsible for shaping financial sector development in these countries. As has been argued elsewhere (Berglof and Bolton 2002; Gabor 2012; Hartwell 2014b), the process of financial sector development in transition economies was simultaneously an endogenously generated, but exogenously-pushed phenomena, with the precise path of financial development being influenced by donors and external actors. In particular, the process of financial sector development, and the ensuing expansion of financial usage in society, filled a need for longer-term financial intermediation, especially in regard to the burgeoning private sector. The structure of the ensuing financial sector in each country, however, was driven by foreign bank entry and by international donor agencies, such as USAID and the World Bank. While these exogenous forces and the extent of their influence was also (in some sense) endogenously determined — host country governments could ignore the World Bank advice, non-solicited donor funds, or put obstacles in the way of foreign bank or capital market entry — the presence of such external pressure did contribute to the path that financial markets ultimately took in transition.

Given this peculiar nature of financialization in transition, it is perhaps instructive to consider a third definition of financialization, as advanced by Greta Krippner (2005). According to Krippner (2005, 181), "financialization reflects the increasing political and economic power of a rentier class." It is this definition that appears to be most broadly understood in the recent financialization literature (van der Zwan 2014), wherein the pursuit of financial accumulation contributes to unstable financial systems and comes at the expense of wage earners. Beyond the positive description of finacialization that the first two definitions contain, this third definition implicitly offers a normative critique of financial sector development — across both transition- and capitalist countries.

When conceptualizing financialization as the increasing power of the financial/rentier class, coupled with the reality that much financial sector development was exogenously influenced (and indeed found a common cause with endogenous forces) in transition, one arrives at an interesting comparative research question: How did this route of imported financialization, creating a rentier class, affect the development of other crucial economic institutions in transition? This question is not peripheral to our understanding of the economic transformation in formerly communist countries, as the very heart of transition or transformation was the changing of institutions that discarded the anachronistic communist-era institutions in favor of those suited to a free-market economy. These institutions were also growing, changing,

expanding, and evolving during the same period in which financial markets were growing, adapting to new market and political conditions. How were these institutions, predominant among which were property rights, affected by an exogenously inspired financialization?

This question reflects the other side of a research agenda with a long pedigree in relation to financial markets, seeking to understand the relationship of institutional development to financial market growth. A familiar and established body of work asserts that financial markets need "good" institutions to exist and thrive (among some of the most recognizable authors being Demirgüç-Kunt and Levine 1996; Durham 2002; and de la Torre, Gozzi and Schmulker 2007), but there is comparatively little work on how financial markets can influence the development of other political and economic institutions in a society. This is a crucial question in regards to both financialization and institutional economics since, undoubtedly, there is a feedback mechanism between financial markets and other institutions that can influence developmental paths of a society (Hartwell 2014a). Therefore, in order to understand the effects of financialization (and especially financialization in transition), it must be analyzed with an institutional lens, with financialization as a process placed into the web of institutions that accompanied the economic and political transition of CEE and FSU countries.

Thus, my purpose in this article is to examine whether the increase in financialization in transition economies over the past quarter of a century, including and beyond bank-based intermediation, helped or hindered the development of other crucial institutions, in particular property rights. The contribution of this research is thus threefold: (i) to form a bridge between institutional and financialization approaches to understanding financial development; (ii) to focus on a highly specific context — namely, transition economies, which have been relatively underexplored in the financialization literature thu8s far; and (iii) to introduce empirical and econometric rigor to an approach that has been more focused on theory and positive description. This examination will provide better understanding of the interplay of financialization with other institutions, as well as recognition of the consequences of financialization outside of the Anglo-American or Western-European sphere.

Financialization and Its Eastward Expansion

Research on the phenomenon of financialization has been a fruitful area in recent years, as evidenced by Natascha van der Zwan's (2014) sweeping survey of the first decade of scholarship. As van der Zwan correctly notes, the financialization literature has grappled with the issue of what "financialization" actually means, with one unifying factor in the literature being that financialization is "a view of finance beyond its traditional role as provider of capital for the productive economy" (van der Zwan 2014, 99). This broad consensus is subdivided into three separate approaches on understanding the spread of financialization: (i) financialization as a regime of accumulation; (ii) financialization of the firm and the ascendance of shareholder value; and (iii) the permeation of financialization into everyday life. In turn, these three approaches have spawned countless research studies into the various attributes of financialization, mainly focused on the US (Krippner 2005) or Europe (Becker and Jäger 2012), with only a few going beyond these geographical areas (notable exceptions being Becker et al. 2010; Gabor 2010; Rethel 2010).

The emphasis on the U.S. and Anglo-American varieties of capitalism has been a way to pick low-hanging fruit, but the experience of the transition economies offers a more fertile ground for observing the complex interactions between finance, financialization, and institutions. However, the question of financialization in transition economies has only been taken up belatedly (prominently by Gabor 2010, 2012; Raviv 2008), perhaps due to both the paucity of data and

the reality of financialization arriving late in transition economies. Perhaps the key issue inhibiting an examination of financialization in transition has been the limitations of the three approaches identified by van der Zwan (2014) in explaining the transformation in CEE and FSU countries. Of the three dominant research strains, research on financialization of the firm is the least relevant in the transition context, mainly due to the hangover of communist management practices, higher levels of risk-aversion, and dependence on foreign capital (which means that firm-level investment decisions are made elsewhere) (see Nölke and Vliegenthar 2009). Similarly, financialization of everyday life in transition economies is an interesting take on the individual-level transition, but has less relevance for transition economies as a whole due to their differing levels of financialization. As a result, it is better suited for a country case study and this places it beyond the scope of this article (for details, see Goldstein 2009; Schwartz and Seabrooke 2008).

Thus, the most salient definition of financialization in transition relates to the role of financialization as a regime of accumulation. Greta Krippner (2005, 198-199) defines accumulation literature by showing that "accumulation [in the US] is now occurring increasingly through financial channels," with an "increasing weight of the financial sector in the economy." By providing data on corporate profits derived from portfolio income, while also noting that profits in the financial sector in the US from the 1970s onward have surged, Krippner (2005) shows that financialization can be characterized as a broader shift toward economy-wide reliance on "individuals and institutions that derive their incomes from financial assets and transactions" (van der Zwan 2014, 105). In her estimation, this constitutes a recurrent effect in capitalism — an effect in modern times that reflects the relationship between globalization and the state.

Krippner's (2005) analysis hints at the bigger issues of financialization that are relevant for transition economies, but is limited by its emphasis on the world's largest economy during some of its toughest or most euphoric economic periods, the United States' economy. Perhaps a more succinct characterization of this idea of financialization as accumulation — one that is more applicable in a transition context — is provided by James Crotty (2003, 272), who suggests that financialization is a "shift from 'patient' committed finance to impatient financial markets." Under this conception, mature financial intermediation, most commonly (but not necessarily) assumed to be banks, represents a slower-paced form of finance that is concerned with increasing the productive capacities of a country (through well-placed investment) and that is guaranteed by retail deposits. On the other hand, impatient finance was a move toward capital market-based financing, where securitization, leveraged activity, and the chase for "yield-differentials" (Gabor 2010, 249) defined the bulk of financial activities. By classifying the financial world into these differentially paced types of finance, one has a better sense of where financialization actually occurs. It is not merely the introduction of capitalist finance or even a spread of bank-based intermediation that induces society-wide financialization, but the move toward accumulation (as noted by Krippner 2005) driven by the pursuit of short-term yields.

This distinction is crucial for my examination of transition because the building of a vibrant financial sector was a critical component of transformation itself. The structure of the communist economy pre-transition had no room for traditional capitalist financial intermediation, with Soviet financial simulacra, such as the GosBank (the central bank), serving as mere extensions of government planning agencies. In order to finance the transition and provide capital for the incipient private sector, transition economies needed to both cultivate a home-grown base of finance as well as to import foreign financial institutions that would perform the "traditional" financial activities of lending to the productive sector. While the building of a home-grown banking sector fared well only in a few countries (i.e., Poland and Slovenia showing the least foreign penetration at approximately 60 and 22 percent of all banks in 2013, respectively), it appears that financial intermediation did succeed in taking root in former communist countries

(Figure 1). This success was never assured, nor predetermined. Berglof and Bolton (2002) cast doubts on the structure of financial transformation in transition and speak of a "Great Divide" in progress, while Giacomo Caviglia, Gerhard Krause, and Christian Thimann (2003) also noted that the level of financial intermediation one decade on remained relatively low. By the time the "transformational recession" (Kornai 1994) was completed, financial intermediation had reached levels comparable to advanced capitalist economies (although not in the rest of Europe), with credit provided by the financial sector in Croatia in 2012 exceeding that of Singapore (96.7 versus 95.9 percent).

Figure 1 about here

There has been some dissent on the effects of the financial sector's introduction in transition. For example, Berglof and Bolton (2002, 78) asserted that "the financial sector has played a small role in the restructuring of the manufacturing sector in transition economies, and in some cases financial liberalization may have undermined real sector development." However, a large body of evidence — including the works of John Bonin and Paul Wachtel (2003), Carlo Cottarelli, Giovanni Dell'Ariccia, and Ivanna Vladkova-Hollar (2005), Mariassunta Giannetti and Steven Ongena (2009), and Aleksandr Akimov, Albert Wijeweera, and Brian Dollery (2009) — refutes this early claim. Perhaps more interestingly, from my perspective, is not the spread of banking or the entry of foreign bank institutions, but what came subsequently in the wake of bank entry, namely the shift to "impatient" finance.

While literature marking the first decade of transition noted that the economies of CEE were characterized by "stock markets [that] are highly volatile and illiquid, and their sustainability is in question" (Berglof and Bolton 2002, 77), this was not the case in the second decade. Indeed, there was a definite sequencing to financial intermediation in transition. In fact, Karel Lanoo and Tanja Salem (2001, 94) stated that "the data confirm that transition economies have preferred to develop strong intermediaries first, before emphasizing the development of [capital] markets." By the first decade of 2000s, capital markets and the shift to "impatient" finance was well underway, with banks themselves expanding credit via securitization and the creation of tradable assets from credit activity (Gabor 2010). In tandem with the change in bank behavior, large capital inflows from institutional investors in the west, resulting from "commercial integration" (Brenton and Gros 1997), also contributed to the increase in financialization and expansion of yield-seeking instruments. A comparative advantage in the new EU member states also appeared to be driving the financial trends. As Allister Keller and Joakim Westerholm (2007, 49) noted, in some ways "eastern" capital markets were better functioning than "western ones," with "results indicat[ing] that while established markets are significantly more liquid in terms of average trade size and trade numbers, they do not always offer lower transaction costs or volatility."

The fact that financialization in transition economies was imported from abroad, and at the behest of external actors, is what has made it a fascinating subject to study. The reality of what appeared to be a society with little experience of basic financial intermediation, much less advanced financial capitalism, suddenly importing financialization in just a decade's time is unlike any of the earlier work on the Anglo-American experience. However, Or Raviv (2008, 301) accurately notes, the transformation of these "political and economic structures did not take place in a vacuum or on a tabula rasa, but in a society entwined with pre-existing social ties, with institutions that either survived from state socialism or were built upon their ruins, and with attitudes, understandings, and behavioral patterns strongly shaped by the previous system."

Thus, defining financialization (and its consequences) requires a deeper understanding of the institutional changes that accompanied transformation.

It is here that one runs into a barrier because what is missing in the financialization literature (among other things) is an institutional focus — an oversight that is perhaps deliberate. As van der Zwan (2014, 115) notes, "financialization studies enter the territory of institutionalist analyses of political economy," but "scholars of financialization have been very critical of the institutionalist approach for the assumed coherence of its national models of capitalism and its adherence to an analytical paradigm, in which finance is still subservient to the productive economy." However, this ascribes a deterministic and almost caricatured version of institutional thought to institutional analyses. It is as much "over the top" as some of the criticisms leveled at neoclassical theory that accuse it of being obsessed with the "rational actor." Institutional economics — and especially the "new institutional economics" of Douglass North (1993), Ronald Coase (1998), and Oliver Williamson (2000) — is concerned with the root causes of institutional creation and change, and thus financialization represents both an outcome of institutional shifts and a cause of institutional evolution. This approach can address the issue that "studies of financialization cannot fully explain the uneven impact that financial markets have had on national political economies. Here, institutionalist contributions to political economy might be capable of complicating accounts of how financialization evolves" (van der Zwan 2014, 115). Joachim Becker et al. (2010, 241) agree that, "in contrast to Keynesian approaches, the State, international organizations and social forces shaping norms and policies are an explicit part" of the reality behind financialization (which they explain as part of regulationist theory).

In order to understand the effects of financialization in transition, one must adopt an institutional focus that places financialization into the web of institutions which accompanied economic and political transition in CEE and FSU countries. This applies particularly to the evolution of property rights, which was the key institution that needed to be built in order to complete the transition from communism to capitalism. According to Elinor Ostrom (1999, 332), building on John R. Commons (1924), "a property right is an enforceable authority to undertake particular actions in specific domains. The rights of access, withdrawal, management, exclusion, and alienation can be separately assigned to different individuals as well as being viewed as a cumulative scale moving from the minimal right of access through possessing full ownership rights." A rich literature on the determinants of property rights already exists — ranging from anthropological approaches (Hann 1998), to political science analysis (Sened 2008), to the sociological literature (Carruthers and Ariovich 2004) — but with less work done from the (modern) economics side. A.G. Mijiyawa (2013) perhaps takes the most comprehensive look at property rights determinants from an economics standpoint, distilling four economic theories about how property rights may arise, including historical forces (events that occurred in the distant past, as in Acemoglu, Johnson and Robinson 2001), economic calculations (property rights are created or arise when their benefits outweigh their costs, as in Demsetz 1967; North 1971), political realities (institutions emerge as a result of the prevailing power structure, as in Sened 2008), or cultural consensus (institutional variations reflect political leaders and their belief about what institutions are good for society, as in Landes 1999).

The move toward property rights in transition economies reflects all these determinants to differing degrees, with only the "historical forces" viewpoint having less of an immediate impact (although some recent research shows the persistence of historical forces in determining the post-communist attitudes toward property in these economies, see Grosfeld and Zhuravskaya 2015). The failure of state-led planning changed the political and economic calculus in favor of the introduction of property rights, while new leadership in Central and Eastern Europe (but not so much in the former Soviet Union) brought a new cultural consensus on the desirability of formal

and state-protected property rights. Creating such rights from whole cloth was difficult, however, given that the entire state apparatus had been directed at prohibiting their existence for decades, and only small-scale rights existed mainly in Central Europe (e.g., the right to own small agricultural plots in Poland). Thus, the state administration had to reorient itself from being the persecutor of property rights to (at least nominally) becoming its protector. In reality, this meant that the state had to immediately *allow* or *tolerate* the existence of formal property rights, moving beyond the small informal rights that had emerged during communism, and to permit these rights throughout the country (Hartwell 2016).

The best intentions of the architects of transition notwithstanding, the process of institutional change in transition economies did not occur in a vacuum, and property rights co-evolved with a host of other political and economic institutions (some of which supported these rights and others which had a less clear effect). As transition moved beyond the dismantling of the communist edifice, the state began to take on the role guarantor of the "right to withhold" (Commons 1924), with the state (generally through the judiciary) enforcing the right of exclusion by private property owners. This shift in the role of the post-communist state — from passive player in the emergence of rights to their active guardian — was necessarily influenced by many factors, including the state capacity to fulfil its role and the evolution of supporting institutions. In regard to state capacity, a gulf emerged between *potential* property rights, or property rights as written in legislation, and *realized* property rights, or the extent to which these rights could be achieved in reality. In countries where capacity was weak, there was a greater gap between the two types of rights, meaning that even the best legislation was constrained if there were no supporting institutions to implement it. This was clearly seen in countries like Ukraine, where the constitution allowed for private property, pledging the state's protection, but corrupt institutions like the police and the judiciary regularly rendered the promises of property meaningless.

In a similar vein, and in line with my current analysis, the desire of the state to act as the protector of the right to withhold also became dependent on other institutions that were still evolving. As noted above, the development of the financial sector in transition economies was driven by both external and endogenous factors, and its unique development path — including the development of capital markets and banks alongside each other — was bound to have an impact on nascent property rights. Theoretically, the extent of the relationship between financialization and property rights is somewhat ambiguous, as the effects appear to be highly dependent upon which definition of financialization is explored. From an institutional standpoint, the existence of a financial sector, even at its basic levels, is inextricably linked with the institutional development of a country. Indeed, the existence of bank-centered intermediation presupposes a level of property rights that is absent in countries with no banking sector to speak of (just as under communism, the outlawing of private property went hand-in-hand with the elimination of capitalist finance and the institution of alternative and directed financing arrangements). As Simon Johnson, John McMillan, and Christopher Woodruff (2002, 1335) note, "property rights are fundamental: entrepreneurs will not invest if they expect to be unable to keep the fruits of their investment." While external finance may circumvent property rights in a particular country, even the attraction of such finance requires a minimum level of property rights to allow for intermediation. Thus, for a country to have a thriving banking sector, it has to have at least this minimum level of property rights — a reality that has been reinforced by World Bank scholarship on the relationship between lending and trust (Bjornskov et al. 2014). If banks can only emerge where property rights exist, then the presence of banks (even state-run ones) offers a clue as to the level of property rights in that particular country.

However, an interesting approach by Douglas W. Diamond and Raghuram Rajan (2005) turns the idea of institutional influence around, postulating that financial institutions (specifically banks) are themselves an incipient form of property rights that came into existence in order to deal with other institutional distortions. That is, whereas a banking system may require property rights to function, the institutional mechanism of the bank acts as an additional layer of rights, building a contractual foundation via short-term depository contracts. This is a highly localized conception of property rights, because it does not presuppose a systemic level of property rights, and the bank's contractual mechanism can be seen as a substitute for broad-based property rights in a system where they are lacking. In other words, banking sectors do not only presuppose a minimum level of property rights, but they *are* a level of minimum property rights that can fill the holes left by other distortions in the economy. Under the theory of "incomplete contracts," "the institutional form of the bank ... arose to improve transaction possibilities over what was contractible through the market place" (Rajan 1998, 525).

If one can theorize, as Raghuram Rajan (1998) and Diamond and Rajan (2005) have, that banks are an early stage of property rights, then how does continued financialization affect property rights in the longer term? That is, existing research has only touched upon the first definition of financialization, so what would the influence be when an economy shifts either toward a greater reliance on capital markets or to a situation where the rentier class gains power? Theoretically, there are many different ways in which this relationship can play out. Paul Langley (2008), among others, argues that securitization is one of the bases of higher-order financialization, a way in which "place-specific uncertainties and debts" can be turned "into securities, abstract risks bundled together as financial products" (Grove 2012, 149). Regardless of the effects of such securitization (for a good overview of its pitfalls, see Lavoie 2012), its mere existence also implies a stronger property rights regime, because such rights are necessary to derive a financial stream from various transactions or debt. In other words, financialization should be associated with — and possibly also cause — stronger property rights, as the benefits of securitization can only be reaped in a stable property rights environment. While Ronald Dore (2008, 1109) sees securitization as "depersonaliz[ing] a large range of intercorporate and interpersonal relationships," and thus negatively creating "only contractual property relationships which can only be enforced in courts," such a depersonalization is the hallmark of broad-based property rights.

As a corollary to this possible relationship, financialization may also be able to create a constituency for property rights, expanding beyond the minimum threshold of private property engendered by banks. That is, the increase in financialization beyond deposits and loan origination, captured by commercial banks, may also bring the benefits of finance to more individuals, leading to a general public support for rights that make such an intermediation possible. However, for this effect to occur, widespread involvement and *utilization* of the financial system (especially capital markets) would be required, with a high degree of involvement in a country's stock market of firms and individuals which are needed to create a broad-based constituency. If such participation did *not* occur, and capital markets were utilized only by a few or by a specific set of politically connected individuals, it is conceivable that financialization would lead to lower property rights overall. As Konstantin Sonin (2003) notes, the rich have no incentive to advocate for broad property rights protections once they have established their own localized property rights, and their interests may even go against such rights.

In a similar vein, the incentives of increased financialization may lead to effects that are detrimental to the emergence of broad-based property rights. The financialization literature argues that bank-based intermediation, in many ways, is a superior form of financial intermediation because it is a more "patient" form of finance (Block and Keller 2009). Under

this conception, market-based finance engenders financial instability due to its focus on shorter-term yields rather than linkages to productive investment. This instability could be detrimental to property rights, as calls for stability override the messiness of the marketplace and requires a dampening of rights in order to guarantee greater stability. Furthermore, there is empirical support for the view that increased financialization, especially when considered as a capital markets phenomenon, can be harmful to institutional development. Christopher A. Hartwell (2014b) explores this effect for stock market performance in transition, but the same effect has not been explored for higher levels of financialization.

Finally, in regard to the emergence of a rentier class, financialization is likely to stymie the development of broad-based property rights. In the first instance, a successful financial sector can create a stream of revenues and higher wages that would be incredibly enticing for a predatory state. Thus, increased financialization can create the conditions for its own demise, as politicians increase regulation and demand rents from the financial sector. This would correspond with lower property rights across the entire economy, since it is rare to see a government, which demands rents from one sector, obtaining from doing the same in other sectors. Additionally, as I argue elsewhere (Hartwell 2014b), there is a strong possibility that increased financialization will permit the concentration of political power in the hands of a financial sector elite, to the broader detriment of general property rights (Sonin 2003). That is, the outsiders of the financial sector slowly become insiders to the political process, which allows them to influence legislation and create policies that benefit the financial sector at the expense of property rights for all. In this sense, financialization may create its own political impetus against property rights, pushing the financial sector ahead of other sectors of the economy and giving it advantage *vis-a-vis* these sectors unfairly.

Empirical Strategy

Empirical Model

To test the proposition of the effect of the various facets of financialization on property rights, I utilize a basic econometric model, expressed in by the following equation:

$$Y_{it}=\alpha FINANCE_{it-1}+\beta MACROINST_{it-1}+\varepsilon_{it} \quad (1)$$

In equation (1), Y is a measure of property rights, $FINANCE$ is one of the measures of financialization (see below), and $MACROINST$ is a vector of macroeconomic and institutional controls from the relevant literature that has impacted property rights development. The theoretical foundation underpinning the model is that property rights institutions in transition would be affected by the broader institutional environment, macroeconomic outcomes, and, my variable of interest — financialization. The model I propose builds on earlier research about the determinants of formal property rights by L.J. Alston and G.D. Libecap (1996) and Timothy Frye (2004), extending it further. I also reference a model I develop in a previous work (Hartwell 2014b) as well as a model developed by Mijiyawa (2013). Additionally, in order to mitigate issues of simultaneity and endogeneity, I lag all independent variables one period.

A key issue is quantifying the extent of property rights. Measuring the Y variable is already a difficult prospect, both for the analysis I attempt here (at the monthly level) and in terms of conceptual precision. In order to provide a clear picture of the two facets of property rights (see Hartwell 2013), I utilize two proxies to capture property rights writ large. The first measure is the

International Country Risk Guide's (ICRG) measure for "investor protection," a composite index that covers three subcomponents (contract viability/expropriation, profit repatriation, and payment delays), each with a maximum score of four points and a minimum score of zero points, for a total of twelve points (with higher scores signifying wider property rights). A subjective indicator that relies on expert judgment, the ICRG indicator has nevertheless been utilized as a proxy for property rights in several works, including by Stoyan Djankov, Caralee McLiesh, and R.M. Ramalho (2006) and Bernardin Akitoby and Thomas Stratmann (2010). More importantly, this measure can be taken as the proxy for *potential* property rights in that the coding of the indicator is based upon the legislation covering contract viability and expropriation, rather than necessarily examining the administration of these rights. A country with a higher ICRG measure of investor protection would thus be assumed to have a more rights-friendly legislative basis, with (in theory) procedures and guarantees against expropriation.

As a check on the subjective ICRG indicator, I also include here an objective measure for property rights, "contract-intensive money," measured as the ratio of money held outside the formal banking sector as a proportion of all money. As opposed to the legislative framework regarding contracts represented by the ICRG scale, contract-intensive money is an accurate representative measure of *realized* property rights, because it shows the behavior of individuals in response to the policies and administration of government. Contract-intensive money has been used successfully by a number of researchers to capture property rights (Clague et al. 1996; Hartwell 2013), based on the theory that stronger property rights manifest themselves in a general willingness to hold money in banks rather than "under the mattress."

A critique may be leveled against contract-intensive money since it may appear odd to utilize (what is essentially) a financial indicator to measure the effects of financialization. In fact, this point has been raised by Andrew Williams and Abu Siddique (2008), who note that it might be better thought of as a measure of financial sector development more broadly. However, as I have noted elsewhere (Hartwell 2014a), while this criticism might be true in terms of broader, multi-year movements in contract-intensive money (or for only a point in time, as in cross-sectional data), at a relatively high frequency such as this monthly dataset, contract-intensive money is more likely to capture perceptions of property rights than slower-moving financial sector developments.[1] Moreover, it has several features that make it suitable for my argument here. In the first instance, contract-intensive money comports well with the theoretical grounding of Diamond and Rajan (2005) in that banks themselves are a form of property rights, and thus utilization of banks would correlate with a higher level of rights. Additionally, my goal here is not to assess the usage of banks as having an impact on property rights, but rather to assess financialization more broadly, thus looking at money outside of the formal financial system since a measure of property rights is a very different from the extent of capital market financialization or the permeation of society by finance. Finally, in an econometric sense, there is very little correlation between the contract-intensive money indicator and other measures I utilize here, with the strongest being a negative correlation between contract-intensive money and stock market capitalization.

To measure "financialization," one faces a bigger challenge, especially given the differing definitions of financialization that exist. To this point, much of the work concerning financialization has been limited to a theoretical or descriptive approach, meaning that empirical measurement of financialization is somewhat limited. Paul Kedrosky and Dane Stangler (2011) perhaps offer the simplest measure — the size of the financial sector as a percentage of GDP — as a crude proxy that can capture the importance of the financial sector in a country, but cannot measure the country's reliance on (the other definitions of) financialization (outlined above). Similarly, Jacob Assa (2012) uses the ratio of employment in the finance industry to total

employment as another measure for financialization, focusing on the extent to which finance has penetrated a society. Going in a different direction, but comparable in their approach, are the indicators utilized by Engelbert Stockhammer (2004) and G.R. Krippner (2005). Stockhammer (2004) proxies financialization in the US, UK, France, and Germany as the sum of interest and dividend income of non-financial businesses (that is, measuring the depth of financialization of firms that are not explicitly financial). Krippner (2005), on the other hand, uses the portfolio income of non-financial firms and profits of financial versus non-financial firms as comparable proxies for financialization in the US. Finally, R.B. Freeman (2010) displays perhaps the most comprehensive approach, stating that the share of profits of the financial sector, the ratio of financial-sector profits to the wages and salaries of all private-sector workers, and the ratio of financial assets divided by GDP are all possible ways to measure financialization.

A common issue of many of these works (notable exceptions being Assa 2012; Stockhammer 2004) is that the chosen measure of financialization is not used in an econometric analysis. In many cases, the chosen variables are not even utilized in graphic analysis or in any rigorous method. Thus, choosing proxies must not only be grounded in the theory, but also subject to econometric diagnostics for suitability. Drawing on the broad definitions of financialization (as noted by Epstein 2005; Krippner 2005), I use three proxies for the different facets of financialization:

- As a broad measure of financialization, focused on the extent of finance in society (and similar to Kedrosky and Stangler 2011), I use the *percentage of private credit to GDP*. This proxy should provide a rough guide to the extent that credit (and debt) is utilized in an economy, pointing the way to quantifying the overall financialization of the economy.
- Whereas private credit to GDP captures bank-based intermediation, the second definition of financialization focuses on the ascendance of capital markets. In order to capture this phenomenon, I include *the log of stock market capitalization* as an additional proxy. While Krippner (2005, 186) argues "strongly against reducing financialization to developments in the stock market," stock market capitalization should capture the broader move toward financialization in an economy beyond banking and bank-related financial intermediation. By examining the size of the stock exchange, and not just its performance, I hope to capture broader financialization trends.
- As a narrow measure for financialization that would capture the third definition of the power of the rentier class, I also include (along the lines of Freeman 2010) *the ratio of average gross monthly wages for the financial sector to the country's wage* for all occupations. This final proxy should capture the way in which the financial sector is valued in a country, with higher ratios showing more importance being placed on finance and financiers and likely their political power as well.

I complement these financialization indicators by a set of institutional and macroeconomic controls derived from the relevant literature (see Garcia and Liu 1999; Hartwell 2014; Mijiyawa 2013) that I fInd to be associated with the development of property rights. In the first instance, the composition of a country's political system, especially regarding actors' ability to enter and influence the system, would likely determine the strength of property rights protection. Theoretically, the relationship between democracy and property rights is unclear. It is quite possible that highly democratic societies will vote in a manner that does not necessarily respect private property, especially for issues deemed to be in the "public good" (Knutsen 2011). In a recent work (Hartwell 2014b), I provide evidence regarding transition economies that somewhat supports this thesis In particular, I find that democracy has a detrimental effect on property rights

development in countries that already have a low level of property rights protection (this effect disappears at higher levels of rights) (Hartwell 2014b). However, Christopher Clague et al. (1996) hypothesize (and provide evidence) that a democratic polity is more likely to support the rule of law than an autocrat, meaning that higher levels of democratic accountability should correspond to better property rights. Empirical evidence from C.H. Knutsen (2011), provided in a developing country context, also supports this effect — meaning that the overall relationship is theoretically unclear in the current context.

In regard to macroeconomic controls, I include both inflation and growth of the money supply (M2) as proxies for macroeconomic mismanagement and central bank influence on property rights development, respectively. Indeed, including growth of money supply is crucial in order to isolate effects of financialization from mere government money-priming to the stock market. Interestingly, the financialization literature appears to entirely ignore the role of central bank monetary expansion (as opposed to interest rate manipulation) as a key driver of financial outcomes, such as higher stock prices. This, in turn, may drive up wages in the financial sector and draw more employees into finance. Thus, financialization may not be a constraining factor on central banks (Epstein 2001), but a direct consequence of bank behavior — a fact that needs to be controlled for here. Similarly, capital account openness (as measured by Chinn and Ito 2008) could be another form of financialization (Stockhammer 2012), but I include it in this model as a measure of openness to financialization in the sense that, just as exports and imports signal an openness to trade (and all of the effects that come from that), so could openness to capital flows signal the ability of financialization to enter the system. Thus, capital openness is a necessary attribute of financialization in transition economies, but it is not a sufficient one.[2] As a final control, I include economic growth here as it may have a salutary effect on the momentum toward property rights in transition. While prior research has found only a weak causality between growth and levels of economic freedom (Justesen 2008), such an effect is likely to be stronger in transition economies since property rights beget growth that, in turn, creates more support for these rights. Rafael La Porta et al. (1999, 222) succinctly expresses the theoretical basis for this by noting: "[G]iven that institutional engineering is costly, high economic growth is exactly what generates the resources necessary for policymakers to establish, reform, or improve existing institutions and policies."

Data and Estimation Strategy

The data to populate the model shown in equation (1) come from various sources, including the IMF's International Financial Statistics, various national statistical and central bank websites, Datastream and Bloomberg for financial data, and ICRG for their institutional indicators. As noted above, the data is from the period between 1989 to 2012, depending upon the country and, where possible, is gathered on a monthly basis.[3] The use of monthly — rather than annual — data helps to track institutional changes at much more disaggregated level, as well as to capture gradual increases in financialization (which is itself a slow-building phenomenon).

The use of monthly data causes some issues in availability. For example, while the property rights indicators have good coverage for a long time-series for nearly every country, coverage on a monthly basis is much easier to find for the broader financialization statistics than for the wage data. Similarly, many macroeconomic indicators that are expressed as a percentage of GDP are only to be found on a quarterly (publicly available) basis. In this instance, I utilize the linear interpolation method of G.C. Chow and An-loh Lin (1971) to expand the GDP data and to retain the more readily available monthly data on institutions, stock markets, and other financial

indicators. For other data that was only available on a quarterly basis, I retain the original series with a concomitant loss in observations. This is necessary with some series because average wages in the financial sector show substantial variation on a month-to-month basis in countries with complete monthly time series data, thus making interpolation a difficult and potentially misleading approach.

The econometric specification I use for equation (1) is a fixed-effects model using the Driscoll-Kraay (1998) standard errors to account for pervasive heteroskedasticity and possible autocorrelation. The advantage of Driscoll-Kraay errors is that they are designed specifically for "large T" datasets, such as this one (Hoechle 2007), which tend to exhibit cross-sectional correlations across spatial units (in this instance, countries). In a transition context, correcting for this reality is incredibly important as the simultaneity of the transition process means a higher likelihood of cross-sectional "contamination" via policies, social linkages, or even crises (such as financial crises or war). Within this dataset, I confirm the presence of spatial correlation via a Breusch-Pagan (1980) LM test of independence (also designed for "large T" datasets), thus arguing for the use of Driscoll-Kraay standard errors.

Results and Discussion

As noted in the theoretical discussion above, there is a strong chance that any econometric estimation will be plagued by reverse causality because it could be that property rights have the dominant influence on financialization, not the other way around. In order to examine this issue empirically, I first undertake a series of Granger causality tests of each measure of financialization versus my two measures of property rights. Given that the metrics I use are stationary (as verified by a series of unit root tests, which I do not reported here), the preferred method for testing Granger causality is the Toda-Yamamoto (1995) approach, which utilizes a vector auto-regression (VAR) approach to check short-term causality.[4] Using an optimal lag length of four, as determined by minimized Akaike-Schwatrz information criterion (AIC and SIC respectively), I show the results of the Granger causality testing in Table 2. For the most part, the Granger causality between financialization and property rights is inconclusive under the VAR structure an expected response in an environment such as a transition economy, which is characterized by feedback and coevolution. The only strong associations I find in this data run from the ratio of financial wages indicator to contract-intensive money (as our theory would predict), and from contract-intensive money to stock market capitalization. This result does not vitiate the belief that stock market capitalization may have an actual (not Granger) causal effect on *realized* property rights. It merely shows that the predictive power of the extent of stock market capitalization is significantly related to realized property rights.

Table 2 about here

In order to establish a more concrete causal link, therefore, I turn to the results of the regressions in Table 3 for each metric of property rights and for financialization in transition economies. Columns 1-4 of Table 3 indicate the relationship between the financialization variables and the investor-protection measure of property rights, while columns 5-7 show contract-intensive money as the dependent variable. The results are interesting from the outset, and appear to vindicate Diamond and Rajan's (2005) thesis that bank intermediation does contribute to higher property rights. In columns 1 and 5, for both metrics of property rights, private credit as a percentage of GDP is strongly and significantly associated with property rights in a positive way (and it is important to note here that, in a transition context, private credit is

almost exclusively given by banks rather than non-bank intermediaries or capital markets). The scale of the effect is very small: each percentage increase in credit leads to an increase of only 0.002 in the ICRG scoring. In regard to contract-intensive money, the effect is even smaller, with each increase in private credit associated with a 0.0002 increase in money held in the formal banking sector.

Table 3 about here

However, once I start to explore other metrics of financialization, the relationship begins to change. In particular, using the growth in the stock market as a proxy for financialization (column 2), it appears that there is a mildly positive, but insignificant effect on investor protection. Two interesting issues are at play here in the specification of investor protection versus stock market capitalization, which warrant further investigation. The first issue is that, unlike credit, democracy appears to be a strong and negative influence on property rights in the presence of a booming stock market. The second issue is that, despite the limited significance of all variables apart from inflation, the model shows a high R^2. This is an econometric warning sign, indicative of either multicollinearity or endogeneity. In this instance, multicollinearity is less likely as pairwise correlations show little evidence of difficulties (Table 4), and a variance-inflation factor analysis (VIF in Table 5) also shows no red flags. However, endogeneity is quite possibly an issue in relation to the democracy indicator, as financialization theory writ large would predict: Earlier levels of financialization could have a negative effect on democracy, because more powerful financial interests could manipulate the fragile democratic system for their own ends. This also comports with the reality of many transition countries, where "oligarchs" and politically connected insiders were able to use their financial power to the detriment of democracy, and thus to property rights (Russia is the biggest example of this trend).

Table 4 and Table 5 about here

To correct for this issue econometrically, column 3 of Table 3 shows an instrumental variable, generalized method of moments (IV-GMM) regression, which instruments democracy in transition as both a function of previous financialization (in this case, a prior-period stock market size) and bank intermediation (as measured by private credit to GDP). Under the assumption that democracy interacts with the growth of financialization, while being simultaneously influenced by the previous level of bank-related property rights (the Diamond-Rajan thesis), I should be able to see a more statistically "clean" relationship by accounting for this endogeneity. Based on the IV-GMM estimation results, this does appear to be the case since the stock market size now has an unambiguously negative and significant relationship with property rights, while democracy also remains a negative explanator (Hartwell 2014). In terms of scale, a 1.0-percent increase in the (log) stock market capitalization of a country will lead to a decrease of 0.0027 in its ICRG investor protection score. Standard IV-GMM checks also show that endogeneity was an issue in the model for democracy, but that our choice of instruments was appropriate in the econometric sense (as evidenced by the Kleibergen-Paap and Hansen J-statistics). Thus, financialization in the form of capital markets appears to have had a negative influence on property rights legislation in a transition context.

The issue of endogeneity is also present in regards to stock market capitalization versus contract-intensive money, as shown in the Granger causality tests in Table 2. If previous information regarding realized property rights can help predict the level of stock market capitalization, it is likely that prior-period property rights could also have influenced the

development of the stock market. To take into account this feedback effect, column 6 of Table 3 has an IV-GMM regression that instruments the lagged level of stock market capitalization with prior-period levels of contract-intensive money, as predicted by the Granger causality results. This instrumentation, in addition to being econometrically valid, returns a similar result as in the investor protection regression, albeit at a lower level of economic significance. Here, too, democracy has almost double the negative effect as financialization on property rights, lending support to the idea that a rentier class might not be as detrimental to property rights as the voting power of one's neighbor.

The final metric of financialization — financial sector wages as a proportion of all wages — gives comparable results regarding the negative influence of increased financialization with the same effect as stock market capitalization. In particular, financial sector wages show a negative effect on both property rights measures, but, interestingly, are only statistically significant in regard to contract-intensive money. Indeed, for each unit increase in the ratio of financial wages to overall average wages, there is a 1.0-percent decline in realized property rights in a specific transition economy. It appears that, in a world where financialization manifests itself via greater demand for financial workers, individuals find their own property rights to be less secure. The behavior of democracy in this regression, counter to the previous five models, may also be capturing this effect since democracy now shows as a positive contributor to realized property rights. In this model, the pressure on property rights may not come from broad-based democracy, but from the democracy of the rentier class. Once this is accounted for, democracy has a positive effect on property rights.

Conclusions

In this article, I attempted to examine the effects of financialization on property rights in a highly specific context — transition economies. Exploring the theoretical relationships between increased financialization across three definitions, I endeavored to clarify the interplay between and influence of the evolution of financial institutions on the creation and development of property rights. Using a unique monthly database of financial and institutional indicators over a period from 1989 to 2012, I tested empirically these theories, with the results indicating that the influence of financialization dependent upon how one defines "financialization." Higher-order financialization, captured in stock market capitalization, or in the ratio of financial wages to the average wage, has uniformly negative effects on the development of property rights. These results hold no matter which indicator of property rights — potential or realized — I utilized. Indeed, these results appear to vindicate Diamond and Rajan's (2005) thesis that broader bank-based intermediation does have a significant and positive influence on property rights, although my econometric specification cannot discern if banks themselves were the source of these rights or merely provided the base for property rights gains. Future empirical and theoretical research into this issue, including examination of the local circumstances of specific transition economies, would shed light on the role of banks in fostering property rights.

While more work needs to be done in the area of quantitative institutional economics (a term that some might find oxymoronic), this article serves as a unique bridge between institutional and financialization approaches. Moreover, I believe that these two approaches should continue to explore synergies in the examination of how the financial sector affects the real economy and the evolution of other institutions. The non-dogmatic nature of institutional approaches lends itself to a methodological and theoretical framework for understanding financialization. As Williamson (2000, 595) noted in his overview of new institutional economics, "the recommendation is that, [while] awaiting a unified theory, we should be

accepting of pluralism." This pluralism, *contrary* to what Julie Froud, Adam Leaver, and Karel Williams (2007) or Wolfgang Streeck (2010) assume, means that one can examine the interplay between institutions and the financial sector without necessarily embedding either one into a normative framework. Perhaps most importantly, institutional analysis rightly believes that "the determinants of institutions are susceptible to analysis by the tools of economic theory" (Matthews 1986, 903), meaning that financialization can be subject to a more rigorous empirical and theoretical examination for its existence, causes, and consequences. This blending of new institutionalist economics and the more sociological tradition of financialization research can, in turn, expand the sum of knowledge about the effect of financialization on all forms of institutions.

Footnotes:

[1] Clague et al. (1996) also run several empirical tests on their measure of contract-intensive money and find that it does capture different effects than other financial sector development indicators.

[2] Unfortunately, the Chinn-Ito indicator is only available annually, and thus it is extrapolated monthly based on annual coding (as in Block 2003).

[3] The countries covered in this analysis include Belarus, Bosnia, Bulgaria, the Czech Republic, Croatia, Estonia, Hungary, Kazakhstan, Kyrgyzstan, Latvia, Lithuania, Macedonia, Mongolia, Poland, Romania, Russia, Serbia, Slovakia, Slovenia, and Ukraine. These countries were chosen based on data availability, and excluded countries had exigencies regarding their financial sectors or data availability issues that made them unsuitable. For example, in addition to having no data on financial wages, the stock exchange in Albania was created as part of the central bank in 1996 and is currently non-operational. Similarly, Armenia had a moribund stock exchange until being purchased in 2009 by NASDAQ, meaning a much shorter time-series than the other countries shown here (in addition, financial wage data was not available). Finally, Georgia, Azerbaijan, and Moldova had little to no data available on financial wages, and Moldova's data on stock market capitalization was incomplete and riddled with gaps.

[4] Jushan Bai and Pierre Perron's (1998) test was also conducted to determine if there were structural breaks within the data. No structural breaks were detected Across each institutional and financialization metric.

References

Acemoglu, Daron, Simon Johnson and James A. Robinson. "The Colonial Origins of Comparative Development: An Empirical Investigation." *American Economic Review* 91, 5 (2001): 1369-1401.

Akomiv, Alexandr, Albert Wijeweera and Brian Dollery. "Financial Development and Economic Growth: Evidence from Transition Economies." *Applied Financial Economics* 19, 12 (2009): 999-1008.

Akitoby, Bernardin and Thomas Stratmann. "The Value of Institutions for Financial Markets: Evidence from Emerging Markets." *Review of World Economics* 146, 4 (2010): 781-797.

Alston, L.J. and G.D. Libecap. "The Determinants and Impact of Property Rights: Land Titles on the Brazilian Frontier." *Journal of Law, Economics, and Organization* 12, 1 (1996): 25-61.

Assa, Jacob "Financialization and Its Consequences: The OECD Experience." *Finance Research* 1, 1 (2012): 35-39.

Bai, Jushan and Pierre Perron. "Estimating and Testing Linear Models with Multiple Structural Changes." *Econometrica* 66, 1 (1998): 47-78.

Beck, Thorsten, Asli Demirgüç-Kunt and Ross Levine. *Financial Institutions and Markets Across Countries and Over Time: Data and Analysis*. World Bank Policy Research Working Paper No. 4943. World Bank, May 2009.

Becker, Joachim, and Johannes Jäger. "Integration in Crisis: A Regulationist Perspective on the Interaction of European Varieties of Capitalism." *Competition & Change* 16, 3 (2012): 169-187.

Becker, Joachim, Johannes Jäger, Bernard Leubolt and Rudy Weissenbacher. "Peripheral Financialization and Vulnerability to Crisis: A Regulationist Perspective." *Competition & Change* 14, 3-4) (2010): 225-247.

Berglof, Erik and Patrick Bolton. "The Great Divide and Beyond: Financial Architecture in Transition." *Journal of Economic Perspectives* 16, 1 (2002): 77-100.

Bjornskov, Christian, Zeljko Bogetic, A.L. Hillman and Milenko Popovic. *Trust and Identity in a Small, Post-Socialist, Post-Crisis Society.* World Bank Policy Research Working Paper No. 6828. World Bank, 2014.

Block, S.A. "Political Conditions and Currency Crises in Emerging Markets." *Emerging Markets Review* 4, 3 (2003): 225-328.

Block, Fred and M.R. Keller. "Where Do Innovations Come From? Transformations in the US Economy, 1970–2006." *Socio-Economic Review* 7, 3 (2009): 459-483.

Bonin, John and Paul Wachtel. "Financial Sector Development in Transition Economies: Lessons from the First Decade." *Financial Markets, Institutions, and Instruments* 12, 1 (2003): 1-63.

Brenton, P.A. and Daniel Gros. "Trade Reorientation and Recovery in Transition Economies." *Oxford Review of Economic Policy* 13, 2 (1997): 65-76.

Breusch, T.S. and Adrian Pagan. "The Lagrange Multiplier Test and Its Applications to Model Specification in Econometrics." *Review of Economic Studies* 47 (1980): 239-53.

Carruthers, B.G. and Laura Ariovich. "The Sociology of Property Rights." *Annual Review of Sociology* 30, 1 (2004): 23-46.

Caviglia, Giacomo, Gerhard Krause and Christian Thimann. "Key Features of the Financial Sectors in EU Accession Countries." In *Financial Sectors in EU Accession Countries*, edited by Christian Thimann, pp. 15-30. Frankfurt, Germany: European Central Bank, 2002.

Chinn, M. D. and Hiro Ito. "A New Measure of Financial Openness." *Journal of Comparative Policy Analysis* 10 (2008): 309-322.

Chow, G.C. and Ah-lon Lin. "Best Linear Unbiased Interpolation, Distribution, and Extrapolation of Time Series by Related Series." *Review of Economics and Statistics* 53, 4 (1971): 372-375.

Clague, Christopher, Philip Keefer, Stephen Knack and Mancur Olson. "Property and Contract Rights in Autocracies and Democracies." *Journal of Economic Growth* 1, 2 (1996): 243-276.

Coase, Ronald. "The New Institutional Economics." *American Economic Review* 88, 2 (1998): 72-74.

Commons, John R. *Legal Foundations of Capitalism*. New York, NY: Macmillan, 1924.

Cottarelli, Carlo, Giovanni DellAriccia and Ivanna Vladkova-Hollar. "Early Birds, Late Risers, and Sleeping Beauties: Bank Credit Growth to the Private Sector in Central and Eastern Europe and in the Balkans." *Journal of Banking & Finance* 29, 1 (2005): 83-104.

Crotty, James. “The Neoliberal Paradox: The Impact of Destructive Product Market Competition and Impatient Finance on Nonfinancial Corporations in the Neoliberal Era.” *Review of Radical Political Economics* 35, 3 (2003): 271-279.

Demsetz, Harold. “Toward a Theory of Property Rights.” *American Economic Review* 57, 2 (1967): 347-359.

Diamond, Douglas and Raghuram Rajan. “Liquidity Shortages and Banking Crises.” *Journal of Finance* 60, 2 (2005): 615-647.

Djankov, Simeon, Caralee McLiesh and R.M. Ramalho. “Regulation and Growth.” *Economics Letters* 92, 3 (2006): 395-401.

Dore, Ronald (2002). Stock Market Capitalism and Its Diffusion. *New Political Economy*, 7(1), pp. 115-121.

——. (2008). Financialization of the global economy. *Industrial and Corporate Change*, 17(6), pp. 1097-1112.

Driscoll, John C., and Aart C. Kraay. "Consistent covariance matrix estimation with spatially dependent panel data." *Review of Economics and Statistics* 80, no. 4 (1998): 549-560.

Epstein, Gerald A. *Financialization, Rentier Interests, and Central Bank Policy*. Manuscript, Department of Economics, University of Massachusetts, Amherst, MA, 2001.

——. “Introduction: Financialization and the World Economy.” In *Financialization and the World Economy*, edited by Gerald A. Epstein, pp. 3-16. Cheltenham (UK): Edward Elgar Publishing, 2005.

Freeman, R. B. “It’s Financialization!” *International Labour Review* 149, 2 (2010): 163-183.

Froud, Julie, Adam Leaver, and Karel Williams. "New actors in a financialised economy and the remaking of capitalism." *New Political Economy* 12, no. 3 (2007): 339-347.

Frye, Timothy. "Credible commitment and property rights: Evidence from Russia." *American Political Science Review* 98, no. 03 (2004): 453-466.

Gabor, Daniela V. "(De) Financialization and Crisis in Eastern Europe." *Competition & Change* 14, no. 3-4 (2010): 248-270.

——. "The Road to Financialization in Central and Eastern Europe: The Early Policies and Politics of Stabilizing Transition." *Review of Political Economy* 24, no. 2 (2012): 227-249.

Garcia, Valeriano F., and Lin Liu. "Macroeconomic determinants of stock market development." *Journal of Applied Economics* 2, no. 1 (1999): 29-59.

Giannetti, Mariassunta, and Steven Ongena. "Financial integration and firm performance: Evidence from foreign bank entry in emerging markets."*Review of Finance* 13, no. 2 (2009): 181-223.

Goldstein, Jonathan P. "Introduction: the political economy of financialization." *Review of Radical Political Economics* 41, no. 4 (2009): 453-457.

Grosfeld, Irena, and Ekaterina Zhuravskaya. "Cultural vs. economic legacies of empires: Evidence from the partition of Poland." *Journal of Comparative Economics* 43, no. 1 (2015): 55-75.

Grove, Kevin. "Preempting the next disaster: Catastrophe insurance and the financialization of disaster management." *Security Dialogue* 43, no. 2 (2012): 139-155.

Hann, C.M. *Property Relations: Renewing the Anthropological Tradition.* Cambridge, UK: Cambridge University Press, 1998.

Hartwell, Christopher A. *Institutional Barriers in the Transition to Market: Explaining Divergence and Performance in Transition Economies.* Basingstoke: Palgrave Macmillan, 2013.

——. *The impact of institutional volatility on financial volatility in transition economies: a GARCH family approach*. Bank of Finland Institute for Economies in Transition (BOFIT) Working Paper No. 6/2014, 2014b.
——. "Do (successful) stock exchanges support or hinder institutions in transition economies?" *Cogent Economics & Finance* 2, no. 1 (2014b): 946620.
——. "Property Rights in Transition Economies." In *Palgrave Dictionary of Emerging Markets and Transition Economics*, edited by Jens Hölscher and Horst Tomann, pp. 170-189. Basingstoke: Palgrave Macmillan, 2016.
Hoechle, Daniel. "Robust standard errors for panel regressions with cross-sectional dependence." *Stata Journal* 7, no. 3 (2007): 281. .
Johnson, Simon, John McMillan, and Christopher Woodruff. "Property rights and finance." *The American Economic Review* 92, no. 5 (2002): 1335-1356.
Justesen, Mogens K. "The effect of economic freedom on growth revisited: new evidence on causality from a panel of countries 1970–1999." *European Journal of Political Economy* 24, no. 3 (2008): 642-660.
Kedrosky, P., and Stangler, D. (2011). *Financialization and Its Entrepreneurial Consequences*. Kauffman Foundation Research Series: Firm Formation and Economic Growth, March.
Keller, Allister, and P. Joakim Westerholm. "Benchmarking a Transition Economy Capital Market." *Australasian Accounting Business & Finance Journal* 1, no. 3 (2007): 49.
Knutsen, Carl Henrik. "Democracy, dictatorship and protection of property rights." *The Journal of Development Studies* 47, no. 1 (2011): 164-182.
Kornai, Janos. "Transformational recession: the main causes." *Journal of comparative economics* 19, no. 1 (1994): 39-63.
Krippner, Greta R. "The financialization of the American economy." *Socio-economic review* 3, no. 2 (2005): 173-208.
La Porta, Rafael, Florencio Lopez-de-Silanes, Andrei Shleifer, and Robert Vishny. "The quality of government." *Journal of Law, Economics, and organization* 15, no. 1 (1999): 222-279.
Landes, D. S. *The wealth and poverty of nations: Why some are so rich and some so poor*. New York: WW Norton & Company, 1999.
Langley, Paul. "Financialization and the consumer credit boom." *Competition & Change* 12, no. 2 (2008): 133-147.
Lannoo, Karel, and Salem, Tanja. "The Emerging Regulatory Framework for Banking and Securities Markets in the CEECs." In *The New Capital Markets in Central and Eastern Europe*, edited by Michael Schröder, pp. 85-124. New York: Springer, 2001.
Lavoie, Marc. "Financialization, neo-liberalism, and securitization." *Journal of Post Keynesian Economics* 35, no. 2 (2012): 215-233.
Matthews, Robin CO. "The economics of institutions and the sources of growth." *The Economic Journal* 96, no. 384 (1986): 903-918.
Mijiyawa, Abdoul' Ganiou. "Determinants of property rights institutions: survey of literature and new evidence." *Economics of Governance* 14 (2013): 127-183.
Nölke, Andreas, and Arjan Vliegenthart. "Enlarging the varieties of capitalism: The emergence of dependent market economies in East Central Europe." *World Politics* 61, no. 04 (2009): 670-702.
North, Douglass C. "Institutional change and economic growth." *The Journal of Economic History* 31, no. 01 (1971): 118-125.

——. “Institutional change: a framework of analysis.” In *Institutional Change: Theory and Empirical Findings*, edited by Sven-Erik Sjöstrand, pp. 35-46. New York: M.E. Sharpe, 1993.
Ostrom, Elinor. “Private and Common Property Rights.” In *Encyclopedia of Law & Economics*, edited by Gerrit de Geest, pp. 332-379.Cheltenham, UK: Edward Elgar, 1999.
Pavlinek, Petr. "Alternative theoretical approaches to post-communist transformations in central and eastern Europe." *Acta Slavica Iaponica* 20 (2003): 85-108.
Rajan, Raghuram G. "The past and future of commercial banking viewed through an incomplete contract lens." *Journal of Money, Credit and Banking* (1998): 524-550.
Raviv, Or. "Chasing the dragon east: exploring the frontiers of Western European finance." *Contemporary Politics* 14, no. 3 (2008): 297-314.
Rethel, Lena. "Financialisation and the Malaysian political economy." *Globalizations* 7, no. 4 (2010): 489-506. .
Schwartz, Herman, and Leonard Seabrooke. "Varieties of residential capitalism in the international political economy: Old welfare states and the new politics of housing." *Comparative European Politics* 6, no. 3 (2008): 237-261.
Sened, Itan.. *The Political Institution of Private Property*. New York: Cambridge University Press, 2008.
Sonin, Konstantin. "Why the rich may favor poor protection of property rights." *Journal of comparative economics* 31, no. 4 (2003): 715-731.
Stockhammer, Engelbert. "Financialisation and the slowdown of accumulation." *Cambridge Journal of Economics* 28, no. 5 (2004): 719-741.
——. “Financialization and the Global Economy.” In *The Political Economy of Financial Crises*, edited by Gerald Epstein and M.H. Wolfson, pp. 512-525. Oxford: Oxford University Press, 2012.
Streeck, Wolfgang. *Re-Forming Capitalism. Institutional Change in the German Political Economy*. Oxford: Oxford University Press, 2010.
Toda, Hiro Y., and Taku Yamamoto. "Statistical inference in vector autoregressions with possibly integrated processes." *Journal of econometrics* 66, no. 1 (1995): 225-250.
Van der Zwan, Natascha. "Making sense of financialization." *Socio-Economic Review* 12, no. 1 (2014): 99-129.
Williams, Andrew, and Abu Siddique. "The use (and abuse) of governance indicators in economics: a review." *Economics of Governance* 9, no. 2 (2008): 131-175.
Williamson, Oliver E. "The new institutional economics: taking stock, looking ahead." *Journal of economic literature* 38, no. 3 (2000): 595-613.
World Bank, World Development Indicators data.